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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/643,079

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Paul Neuman

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INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

DADA, BEEMNET W

ART UNIT

PAPER NUMBER

2135

NOTIFICATION DATE

DELIVERY MODE

03/25/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/643,079	Applicant(s) NEUMAN ET AL.	
	Examiner BEEMNET W. DADA	Art Unit 2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in reply to a Pre-Brief conference request filed on November 21, 2007. Claims 1-25 are pending.

Response to Arguments

Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 12-16, 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Pearce US 5,657,445.

As per claim 1, Pearce teaches a data processing system comprising:

a processor (figure 2, units 105, 110),

a non-volatile storage medium including configuration data that describes a configuration of the non-volatile storage medium (i.e., hard disk drive, 180, that includes critical areas such as, master boot record, column 4, lines 46-55),

a controller for managing data exchanges with the non-volatile storage medium and for invoking an uninterruptible software routine (i.e., System management mode Code) in response to first software attempting to access the configuration data (i.e., invoking System management mode (SMM), in response to an instruction trying to access the hard disk drive and/or critical areas of hard disk drive, column 6, lines 46-lines 64);

the uninterruptible software routine having code for determining whether the first software is authorized to access the configuration data and for allowing or preventing any such access according to the determination [column 6, line 62-column 7, line 33].

As per claim 15, Pearce teaches a system comprising:

a processor (figure 2, units 105, 110),

a first non-volatile storage (figure 2, flash memory 124) medium having first (figure 2, system BIOS, 255) and second firmware (figure 2, SMM code 250) and

a second non-volatile storage medium for storing configuration data that describes a configuration of the second non-volatile storage medium (i.e., hard disk drive, 180, that includes critical areas such as, master boot record, column 4, lines 46-55);

the processor having a first mode of operation for executing the first firmware and a second mode of operation for executing the second firmware (i.e., in system management mode or regular mode, column 5, lines 62-column 6, line 5);

the processor being arranged to enter the second mode of operation and execute the second firmware in response to the first firmware, executing in the first mode of operation, at least attempting to access the configuration data (i.e., invoking System management mode (SMM), in response to a BIOS instruction tries to access the hard disk drive and/or critical areas of hard disk drive, column 6, lines 46-lines 64);

wherein the second firmware when executed by the processor, determines whether the first software is authorized to access the configuration data [column 6, line 62-column 7, line 33].

As per claims 16, 21 and 22, Pearce teaches a method of controlling a data processing system, the system comprising

a processor, first non-volatile storage storing first software and an uninterruptible software routine for executing within respective first and second modes of operation of the processor (figure 2, flash memory 124, system BIOS, 255, SMM code 250, executing in system management mode or regular mode, column 5, lines 62-column 6, line 5); and

a second non-volatile storage medium storing configuration data that describes a configuration of the second non-volatile storage medium (i.e., hard disk drive, 180, that includes critical areas such as, master boot record, column 4, lines 46-55);

the first software having associated identification data [column 6, lines 47-50];

the method comprising the steps of: executing the uninterruptible software routine, in the second mode of operation of the processor, in response to the first software, executing within the first mode of operation of the processor, at least attempting to access the configuration data (i.e., invoking System management mode (SMM), in response to a BIOS instruction tries to access the hard disk drive and/or critical areas of hard disk drive, column 6, lines 46-lines 64);

determining whether the first software is authorized to access the configuration data [column 6, line 62-column 7, line 33]; and

controlling access to the configuration data according to that determination [column 6, line 62-column 7, line 33].

As per claim 2, Pearce further teaches the method in which the first software is initialization software for initializing the data processing system [column 5, lines 50-64].

As per claim 3, Pearce further teaches the system wherein the configuration data comprises at least a portion of first data included in data structure of the non-volatile storage medium [figure 1].

As per claim 4, Pearce further teaches the system wherein the data structure includes a Master Boot Record [figure 1].

As per claims 5 and 6, Pearce further teaches the system wherein the configuration data comprises executable code, which includes Master Boot Code [column 4, lines 45-55].

As per claim 12, Pearce further teaches the system wherein the controller is adapted to in response to any attempt by the first software to access the configuration data, trap said attempt and send an SMI interrupt to the processor, and the uninterruptible software routine includes a system management mode code executable only within a constrained or protected operating environment for disabling the controller's trap in response to a determination that the first software is authorized to access the configuration data [column 6, line 46-column 7, line 32].

As per claim 13, Pearce further teaches the system further comprising an operating system stored in the non-volatile storage medium, and an operating system loader for loading the operating system for the data processing system, and wherein the configuration data is arranged to provide access to the operating system loader to load the operating system from the non-volatile storage medium [figure 1 and column 6, lines 46-59].

As per claim 14, Pearce further teaches the system wherein the first software is BIOS code [column 5, lines 62-65 and column 6, lines 17-29].

As per claims 23, Pearce further teaches the system wherein the uninterruptible software has a code for hanging the data processing system in response to a determination that the first software is not authorized to access the configuration data [column 6, line 62-column 7, line 33].

As per claim 24, Pearce further teaches the system wherein the controller is an I/O controller hub [figure 2].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-11, 17-20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pearce US 5,657,445 in view of Wildgrube et al. US 6,249,872 B1 (hereinafter Wildgrube).

As per claims 7-11, 17-20 and 25, Pearce teaches the system as indicated above. Pearce further teaches determining whether the first software is authorized to access the configuration data and for allowing or preventing any such access according to the determination [column 6, line 62-column 7, line 33]. Wildgrube further teaches encrypting/decrypting configuration data, and decrypting configuration data in response to determination that a first software is authorized to access the configuration data, and comparing digital signature to determine the first software is authorized to access the configuration data [column 2, line 35-column 3, line 10]. It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to employ the teachings of Wildgrube within the system of Pearce in order to enhance the security of the system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BEEMNET W. DADA whose telephone number is (571)272-3847. The examiner can normally be reached on Monday - Friday (9:00 am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2135

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Beemnet W Dada

March 16, 2008

/KIMYEN VU/

Supervisory Patent Examiner, Art Unit 2135